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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/804,924	03/12/2001	Jong-Hyun Choi	S84.12-0009	2772

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EXAMINER

GONZALEZ, JULIO C

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/804,924

Applicant(s)

CHOI, JONG-HYUN

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5 and 8-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5 and 8-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the insulator contacting the rotor when the coil expands as disclosed in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 5, 8 and 9-12 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 5 discloses that the insulator is arranged to *contact the rotor when the coil expands during operation of the motor*. However, such statement of having the insulator contacting the rotor is not found in the specifications. The specifications only disclosed that the insulator is used to prevent withstand voltage by insulating the rotor 3 from the coil (page 3, lines 24, 25 of the present application). Besides in the event of the rotor contacting the insulator, such device (the insulator) will be burn out by the friction and high velocity rpm of the rotor in which case, it would expose the coils to the rotor.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns in view of Smader and Miller (US 4,318,022).

Burns discloses an electrical machine having a stator 11, a rotor disposed in the stator, coil 18 wound around the core of the stator 11, a one piece circumferential electrical insulator 23 (column 6, lines 4-6) separating the rotor from the coil 18 and using a yarn 25 to secure the coil 18 (see figure 8).

However, Burns does not disclose *explicitly* show in the drawings, a one piece cylindrical insulator and using an insulator to separate all of the coils.

On the other hand, Smader discloses for the purpose of providing a rigid anchor for the ends of the field winding of a motor, a one piece cylindrical insulator 4 (see figure 3) which separates the windings from the rotor (see figure 4).

Moreover, Miller discloses for the purpose of reducing motor failure due to winding interconnections, laces 28 which hold in place the windings (see figure 8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to disclose an insulator for separating the rotor from the stator coils as disclosed by Burns and to modify the invention by explicitly disclosing a one piece insulator for the purpose of providing a rigid anchor for the ends of the field winding of a motor as disclosed by Smader and to further disclose using a yarn for securing the windings for the purpose of reducing motor failure due to winding interconnections as disclosed by Miller.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Burns, Smader and Miller as applied to claim 1 above, and further in view of Nielsen.

The combined motor discloses all of the elements above. However, the combined motor does not disclose that the insulator is refrigerant-proof and oil-proof.

On the other hand, Nielsen discloses for the purpose of preventing damage to a motor by efficiently centering the rotor and avoiding contact with the stator, insulating material which is refrigerant-proof and oil-proof (column 2, lines 2-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined motor as disclosed above and to modify the invention by using insulating means that is oil-proof for the purpose of preventing damage to a motor by efficiently centering the rotor and avoiding contact with the stator as disclosed by Nielsen.

6. Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns, Smader and Miller as applied to claims 5 and 10 above, and further in view of ordinary skill in the art.

The combined motor discloses all of the elements above. However, the combined motor does not disclose the material of the yarn.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use polyester material for the yarn, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In *re Leshin*, 125 USPQ 416.

Response to Arguments

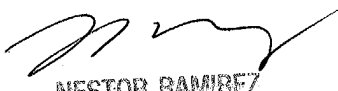
7. Applicant's arguments with respect to claims 5 and 8-12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


NESTOR RAMIREZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Jcg

January 8, 2003